

SNOWMOBILE ACCIDENT ANALYSIS
PROVINCE OF MANITOBA

WINTER OF 1984-85

This report includes all snowmobile accidents reported in Manitoba during the Winter of 1984-85. Reportable accidents are those involving fatalities, personal injuries or property damage in excess of \$100.00. The primary function of this information is to help instructors in the Manitoba Snowmobile Safety Training Program, identify the major causes of snowmobile accidents and to enable them to lend special emphasis to the appropriate countermeasures.

	<u>1982-83</u>	<u>1983-84</u>	<u>1984-85</u>	<u>Percent Change from 1983-84</u>
Number of Accidents	79	73	59	- 19.2%
Number of Snowmobiles	93	85	71	- 16.5%
Number of machines registered in Province* (As of end of July for year indicated)	21,767	29,196	35,798	+ 22.6%
Fatal Accidents	6	2	1	- 50.0%
Number of Fatalities	7	2	1	- 50.0%
Injurious Accidents	59	55	29	- 47.3%
Number of Personal Injuries (Not including fatalities)	79	63	47	- 25.4%
Number of Accidents (injuries not stated)	14	16	29	+ 81.3%
Property Damage	\$50,327	\$62,937	\$70,300	+ 11.7%

*Snowmobiles in Manitoba are registered for three year registration periods. The figures listed represent the aggregate for the portion of the three year registration to the year indicated. 1984-85 was year three of the 1982-85 registration period.

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A. ACCIDENTS BY MONTH

	<u>1982-83</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>1983-84</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>1984-85</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>PERCENT CHANGE FROM 1983-84</u>
September	0	-	1	1.4%	0	-	- 100.0%
October	1	1.3%	0	-	0	-	-
November	4	5.1%	5	6.8%	6	10.2%	+ 2.0%
December	11	13.9%	19	26.0%	14	23.7%	- 26.3%
January	18	22.8%	21	28.8%	18	30.5%	- 14.3%
February	29	36.7%	24	32.9%	13	22.0%	- 45.8%
March	10	12.7%	2	2.7%	8	13.6%	+ 300.0%
April	5	6.3%	1	1.4%	0	-	- 100.0%

B. ACCIDENT LOCATIONS

	<u>1982-83</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>1983-84</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>1984-85</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>PERCENT CHANGE FROM 1983-84</u>
Public Roadway	31	39.2%	22	30.1%	27	45.8%	+ 22.7%
Rivers, Lakes and Creeks . . .	19	24.1%	18	24.6%	5	8.5%	- 72.2%
Ditches and Right-of-Ways . . .	9	11.4%	12	16.4%	7	11.9%	- 41.7%
Fields, Farmyards, Private Property	5	6.3%	9	12.3%	3	5.1%	- 66.7%
Marked and Groomed Trails . . .	5	6.3%	5	6.8%	9	15.3%	+ 80.0%
Bush Trails and Winter Roads .	3	3.8%	0	-	1	1.7%	+ 100.0%
Lakeshore, Riverbanks, Floodway	3	3.8%	1	1.4%	1	1.7%	-
School Grounds, Sport Fields. .	2	2.5%	1	1.4%	0	-	- 100.0%
Parking Lots	1	1.3%	4	5.4%	1	1.7%	- 75.0%
Driveways	1	1.3%	1	1.4%	3	5.1%	+ 200.0%
Backlane, Alleys	0	-	1	1.4%	1	1.7%	-
*Unknown	0	-	0	-	1	1.7%	+ 100.0%

*Accident report contained insufficient information to determine location.

C. ACCIDENT TYPES

	<u>1982-83</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>1983-84</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>1984-85</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>PERCENT CHANGE FROM 1983-84</u>
Snowmobile/Fixed Object Collision	26	32.9%	25	34.2%	11	18.6%	- 56.0%
Snowmobile/Motor Vehicle Collision	17	21.5%	17	23.3%	23	39.0%	+ 35.3%
Single Snowmobile Accident	17	21.5%	14	19.1%	7	11.8%	- 50.0%
Snowmobile/Pedestrian Collision	6	7.6%	4	5.5%	5	8.5%	+ 25.0%
Snowmobile/Snowmobile Collision	12	15.2%	12	16.4%	12	20.3%	-
Cutter Upset	1	1.3%	1	1.4%	1	1.7%	-

D. LIGHT CONDITIONS

	<u>1982-83</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>1983-84</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>1984-85</u>	<u>% OF TOTAL ACCIDENTS</u>	<u>PERCENT CHANGE FROM 1983-84</u>
Daylight	33	41.8%	22	30.1%	21	35.6%	- 4.5%
Darkness	41	51.9%	42	57.5%	29	49.2%	- 31.0%
Dusk	3	3.8%	9	12.3%	8	13.6%	- 11.1%
Unknown	2	2.5%	0	-	1	1.7%	+100.0%

E. AGE/SEX OF OPERATOR

	<u>1982-83</u>	<u>% OF TOTAL OPERATORS</u>	<u>1983-84</u>	<u>% OF TOTAL OPERATORS</u>	<u>1984-85</u>	<u>% OF TOTAL OPERATORS</u>	<u>PERCENT CHANGE FROM 1983-84</u>
Under 16 years of age	8	8.7%	12	14.6%	15	13M/2F 21.1%	+ 25.0%
16 - 20	20	21.7%	16	19.5%	15	15M/0F 21.1%	+ 6.3%
21 - 25	15	16.3%	22	26.8%	14	14M/0F 19.7%	- 36.4%
26 - 30	22	23.9%	16	19.5%	7	6M/1F 9.9%	- 56.3%
31 - 35	10	10.9%	5	6.1%	9	9M/0F 12.7%	+ 80.0%
Over 35	17	18.5%	9	11.0%	8	8M/0F 11.3%	- 11.1%
Unknown	0	-	2	2.4%	3	4.2%	+ 50.0%

F. CONDITIONS OF OPERATORS

	<u>1982-83</u>	<u>% OF TOTAL OPERATORS</u>	<u>1983-84</u>	<u>% OF TOTAL OPERATORS</u>	<u>1984-85</u>	<u>% OF TOTAL OPERATORS</u>	<u>PERCENT CHANGE FROM 1983-84</u>
Normal	56	60.9%	58	70.7%	52	73.2%	- 10.3%
Intoxicated	15	16.3%	10	12.2%	6	8.5%	- 40.0%
Had Been Drinking	18	19.6%	14	17.1%	12	16.9%	- 14.3%
Unknown	3	3.3%	0	-	1	1.4%	+ 100.0%

G. REGISTRATION

	1982-83	% OF TOTAL MACHINES	1983-84	% OF TOTAL MACHINES	1984-85	% OF TOTAL MACHINES	PERCENT CHANGE FROM 1983-84
Snowmobiles Registered	53	57.0%	49	57.6%	44	61.9%	- 10.2%
Snowmobiles Not Registered	36	38.7%	7	8.3%	17	23.9%	+ 142.9%
Snowmobiles Not Required to be Registered	4	4.3	29	34.1%	10	14.1%	- 65.5%
Unknown	0	-	0	-	0	-	-

H. FATALITIES AND PERSONAL INJURIES

	SLIGHT INJURY	SERIOUS INJURY	(HOSPITALIZED)	FATALITY	TOTAL	% OF TOTAL INJURIES
Snowmobile Operators	14	15		1	30	62.5%
Snowmobile Passengers	7	6		0	13	27.1%
Cutter Passenger	1	0		0	1	2.1%
Other (Pedestrian)	2	2		0	4	8.3%

I. OWNERSHIP OF SNOWMOBILES

	1982-83	% OF TOTAL MACHINES	1983-84	% OF TOTAL MACHINES	1984-85	% OF TOTAL MACHINES
Operated by Owner	50	53.8%	44	51.8%	34	47.9%
Operated by Other	37	39.8%	38	44.7%	37	52.1%
No Operator	1	1.1%	3	3.5%	0	-
Unknown	5	5.4%	0	-	0	-

J. POSSIBLE INFRACTIONS NOTED ON ACCIDENT REPORTS

(1) The Snowmobile Act (18)

- 8 - Operating a snowmobile in prohibited area.
- 5 - Operating an unregistered snowmobile.
- 4 - Operating snowmobile carelessly and without reasonable consideration.
- 1 - Failure to comply with rules before crossing roadway.

(2) Highway Traffic Act (4)

- 1 - Failure to stop when required by traffic control device.
- 1 - Failure to notify owner of unattended vehicle involved in an accident.
- 1 - Failure to report serious accident.
- 1 - Driving while licence is suspended.

(3) Criminal Code of Canada (3)

- 2 - Operating a snowmobile while having a blood/alcohol level exceeding 80 mg. of alcohol in 100 ml. of blood.
- 1 - Criminal negligence.

K. VEHICLE DEFECTS

The following machine defects were noted on the accident reports as contributing either directly or indirectly to the accident.

- 2 - Inoperative headlights.
- 1 - Throttle malfunction.

L. DESCRIPTION OF ACCIDENT TYPES

(1) Snowmobile/Motor Vehicle Collisions (23)

There were 23 accidents reporting collisions between snowmobiles and motor vehicles. These collisions resulted in 6 slight injuries to 4 operators, and 2 to passengers, and 6 serious injuries to 4 operators and 2 to passengers. Eleven accidents occurred during darkness, 7 occurred during daylight hours, and 5 occurred during dusk. It was reported that three operators had been drinking, and that 1 operator was intoxicated at the time of the accident.

- 13 - Accidents occurred when snowmobiles were being operated on roadways;
 - 9 - accidents involved snowmobiles colliding with parked motor vehicles;
 - 1 - accident involved a snowmobile colliding with a motor vehicle that was exiting a driveway;
 - 1 - accident involved a snowmobile colliding with a motor vehicle that was entering a driveway;
 - 1 - accident involved a snowmobile being operated on the left side of a roadway colliding head-on with an on-coming motor vehicle.
 - 1 - accident involved a snowmobile side-swiping a motor vehicle when it attempted to pass the motor vehicle.
- 5 - Accidents occurred when snowmobiles that were being operated across roadways collided with passing motor vehicles.
- 1 - Accident occurred when a snowmobile that was being operated on a private driveway, hit a snowdrift, and then collided with a parked motor vehicle.
- 1 - Accident occurred when a snowmobile travelling on the shoulder of a roadway collided with a motor vehicle that made a right hand turn across it's path.
- 1 - Accident occurred when a snowmobile being operated in a backlane attempted to stop, and slid into an on-coming motor vehicle.
- 1 - Accident occurred when a snowmobile that was parked in a parking lot was struck by a car exiting a parking stall.
- 1 - Accident contained insufficient information to actually determine what happened.

(2) Snowmobile/Snowmobile Accidents (12)

There were 12 accidents involving snowmobiles in collision with other snowmobiles. These accidents resulted in 6 serious injuries to 4 operators, and 2 passengers; and, 3 slight injuries to 4 operators and 4 passengers. Four accidents occurred during darkness, 7 during daylight hours, and 1 during dusk. It was reported that 2 operators had been drinking, and 4 operators were intoxicated at the time of their accidents.

- 6 - Accidents occurred when snowmobiles drove into the rear of another snowmobile:
- 2 - accidents occurred on private property. In one accident, it was reported that one snowmobile did not have functional taillights.
- 2 - accidents occurred on frozen rivers. In both cases, the first snowmobile stopped suddenly and the machine following slid into it.
- 2 - accidents occurred on roadways when the first machine stopped suddenly causing the following snowmobiles to collide with them. Alcohol was a contributing factor in one of the accidents.
- 5 - Accidents occurred when snowmobiles that were being operated on snowmobile trails collided with each other. In one case the snowmobiles collided after meeting on a blind curve. It was reported that one of the snowmobiles involved in the collision was being operated at excessive speed on the wrong side of the trail. In a second accident which took place during the hours of darkness, it was reported that one of the snowmobiles did not have functional headlights.
- 1 - Accident occurred when two snowmobiles that were being operated on a roadway collided with each other. It was reported that one snowmobile swerved in front of the second snowmobile and that alcohol was also a contributing factor in the accident.

(3) Snowmobile/Fixed Object Collisions (11)

There were 11 accidents reporting collisions between snowmobiles and fixed objects, resulting in 9 serious injuries to 7 operators and 2 passengers, and 2 slight injuries to 1 operator and 1 passenger. Four accidents occurred during darkness, 4 during daylight, 2 at dusk and 1 unknown. It was reported that 2 operators had been drinking prior to the accidents, and 1 operator was intoxicated.

- 4 - Accidents occurred when operators lost control of their snowmobiles and collided with trees. Alcohol was a contributing factor in one of the accidents.
- 4 - Accidents occurred when snowmobiles were being operated in ditches;
- 2 - operators lost control and struck barbed wire fences.
- 1 - snowmobile struck a pile of dirt, causing the machine to flip.
- 1 - operator lost control and struck a postal box. The operator had been drinking prior to the accident.

(3) Snowmobile/Fixed Object Collisions (cont'd)

- 1 - Accident occurred when a snowmobile struck a house. It was reported that the throttle stuck.
- 1 - Accident occurred when the operator lost control of the snowmobile and collided with a fire hydrant. It was reported that the operator was intoxicated at the time of the accident.
- 1 - Accident occurred when a snowmobile that was travelling on a trail struck a tree stump causing the machine to flip.

(4) Single Snowmobile Accidents (7)

There were 7 single snowmobile accidents, resulting in 1 fatality and 5 slight injuries to operators. All seven of the accidents occurred during the hours of darkness. It was reported that three operators had been drinking prior to their accidents.

- 2 - Accidents occurred when snowmobiles being operated on frozen rivers struck snowdrifts causing the machines to flip. In both situations the operators had been drinking prior to the accident.
- 2 - Accidents occurred when snowmobiles that were being operated in ditches struck snowdrifts causing the machines to flip.
- 1 - Accident occurred when a snowmobile that was being operated on a trail struck a snowdrift and flipped.
- 1 - Accident occurred when a snowmobile that was being operated on a frozen lake, struck a snowdrift causing the operator to lose control of the snowmobile, and collide with the shoreline.
- 1 - Accident occurred when the operator of the snowmobile lost control of his machine causing him to be thrown into a fence post. This accident resulted in the operator being killed.

(5) Snowmobile/Pedestrian Collisions (5)

There were 5 accidents involving snowmobiles in collision with pedestrians resulting in 2 serious injuries, and 2 slight injuries to pedestrians. Two accidents occurred during daylight hours, while 3 occurred during darkness. It was reported that 2 operators had been drinking prior to the accidents.

- 2 - Accidents occurred when snowmobiles were being operated on roadways. In one accident that took place during darkness, the operator had been drinking prior to the accident, and the snowmobile headlight was not functional at the time.
- 1 - Accident occurred when a snowmobile that was being operated on a frozen river, struck a person who had fallen off another snowmobile. It was reported that the operator had been drinking prior to the accident.
- 1 - Accident contained insufficient information to actually determine what happened.
- 1 - Accident occurred when a snowmobile being operated on a race track, went out of control and struck a spectator.

(6) Snowmobile/Cutter Accident (1)

There was 1 accident which involved a snowmobile cutter. This accident occurred during daylight and resulted in a slight injury to the passenger of the cutter.

- 1 - Accident occurred when a snowmobile that was travelling on a roadway swerved, overturning the snowmobile and cutter.

M. FATALITIES

During the 1984-85 snowmobile season, there was one fatal accident resulting in one operator fatality.

- On December 29, 1984, a 20-year old Thompson man was killed when he lost control of the snowmobile he was operating, and was thrown into a fence post.

N. COMMENTARY

The need for operator education and proper attitude development cannot be over emphasized. This holds true particularly for our young snowmobile operators. Of the accidents reported during the 1984/85 season, 42.3% involved operators 20 years of age and younger.

Public roadways accounted for 45.8% of the accident locations. In the majority of cases, snowmobiles were operated along roadways in direct violation of The Snowmobile Act.

Vehicle defects were reported in less than 6% of the accidents. In most cases, the failure was not on the part of the snowmobile, but that of its operator. Any accidents where vehicle defects were mentioned, may be attributed to poor regular maintenance or improper pre-start checks.

Alcohol once again appears to be a contributing factor in a significant number of accidents. Although alcohol was not as prevalent as it was in the accidents reported during the 1983-84 season, operators in over 25% of the reported accidents had been drinking or were in fact intoxicated.